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AND TRADEMARK OFFICE

Applicant(s): LeBoeuf et al.

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For: PROCESSING SUBSTRATE AND/OR
SUPPORT SURFACE

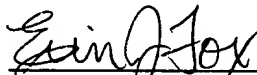
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January 13, 2003



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DECLARATION OF VIRGINIA D. KARUL UNDER 37 C.F.R. §1.131

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

I, VIRGINIA D. KARUL, hereby declare and state:

1. I am currently employed by S. C. Johnson & Sons, Inc. (hereinafter referred to as "S. C. Johnson"), assignee of the above-identified application.
2. I am currently employed by S. C. Johnson as a Senior Research Scientist.
3. I have been employed by S. C. Johnson since the S. C. Johnson acquisition of DowBrands, Inc. on January 23, 1998.
4. Between 1975 and June of 1983, I was employed by Dow Chemical Company and Cordis Dow Corporation. Between October of 1987 and January 23, 1998, I was employed by DowBrands, Inc. and Dow Chemical Company.
5. During my time at Dow Chemical Company, DowBrands, Inc., and S. C. Johnson, I worked in research and development except for a period of nine months in marketing.
6. Attached hereto as Exhibits A, B, and C are photographs of sample cutting sheets that I reduced to practice at a time prior to June 18, 1999.

7. The sample shown in photos 1-5 of Exhibit A includes a top, cut-resistant, thermoplastic layer, a middle absorbent layer, and a bottom, liquid impervious thermoplastic layer.

8. I hand-made the sample of Exhibit A by laminating a sheet of thermoplastic material on top of an absorbent pad produced by Sealed Air Corporation of Saddle Brook, New Jersey. I created the sheet of thermoplastic material by cutting strips of material approximately 3/8 inch wide from a thermoplastic sheet and wove the strips in a basket weave pattern such that gaps were formed between adjacent strips. The absorbent pad consisted of a top layer of a liquid-impervious, thermoplastic material, a middle absorbent layer, and a bottom layer of a liquid-pervious thermoplastic material. I laminated the absorbent pad to the thermoplastic sheet with the liquid-impervious layer of the absorbent pad facing away from the thermoplastic sheet so that the liquid impervious layer formed a bottom, barrier layer for the sample.

9. The sample shown in photos 6-9 of Exhibit B includes a top, cut-resistant and woven layer, a middle absorbent layer, and a bottom, liquid-impervious thermoplastic layer.

10. I also hand-made the sample of Exhibit B by heat sealing the edges of an absorbent pad produced by Sealed Air Corporation of Saddle Brook, New Jersey, to the bottom of a needlepointing canvas that I purchased from Michael's, The Arts and Crafts Store® in Racine, Wisconsin. The absorbent pad included a top layer of liquid-impervious, thermoplastic material, a middle absorbent layer, and a bottom layer of liquid-pervious thermoplastic material. I heat sealed each edge of the absorbent pad to the woven material with the liquid-impervious layer of the absorbent pad facing away from the woven material, thereby creating a bottom, barrier layer for the sample.

11. The sample shown in photos 10-13 of Exhibit C includes a top, cut-resistant and woven layer, a middle absorbent layer, and a bottom, liquid-impervious thermoplastic layer.

12. I further hand-made the sample of Exhibit C by laminating a top woven layer, a middle layer consisting of an absorbent pad produced by Sealed Air Corporation, of Saddle Brook, New Jersey, and a bottom, liquid-impervious thermoplastic layer. The woven material is the same needlepointing canvas material as identified in section 10 that I purchased from Michael's, The Arts and Crafts Store® in Racine, Wisconsin. Further, the absorbent pad consisted of a top layer of liquid-impervious, thermoplastic material, a middle absorbent layer, and a bottom layer of liquid-pervious thermoplastic material. During assembly, I positioned the absorbent pad with the liquid-impervious layer of the absorbent pad facing away from the woven layer and toward the bottom liquid-impervious layer.

13. I created all of these samples within a two week span of time and, during the same period of time, I also performed cut-resistance testing on such samples.

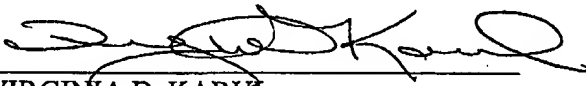
14. The cut-resistance testing I performed involved attempting to slice the top layer of each of the sheets with a serrated knife multiple times in multiple directions.

15. All three samples exhibited good cut-resistance properties whereby they did not allow cut-through of the top layer, nor did they allow compromise of the sheet itself or the absorbent layer therein.

16. All of the acts set forth in paragraphs 6-15 above were performed prior to June 18, 1999, in the United States of America.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: January 13, 2003


VIRGINIA D. KARUL



Your reference: 29252/2961

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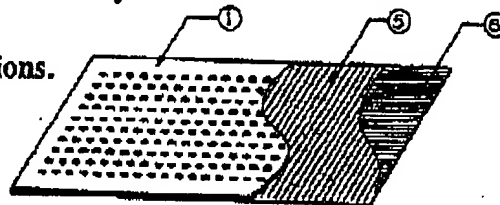
(54) Title of the invention: SIMPLE PAPER CUTTING BOARD

(57) Abstract

Objective: To suppress the spreading of bacteria and reduce food poisoning, by using a simple paper cutting board with a single layer, for hygienic preparation of food, by keeping moisture outside the cutting board and retaining the blood of fish meat in the middle layer of a multilayered paper cutting board. If an antibacterial agent is contained in the paper material, food poisoning can be reduced further.

Composition: A board with small holes all across one or both sides of the paper material with waterproof treatment, and a simple paper cutting board of said paper board as its top material and which is made of a material of high water retention, water absorbent layer as its middle layer and flexible waterproofed thin film as its bottom layer.

Claims on page 2 omitted according to client's instructions.



Detailed explanation of the invention

[0001]

Area of industrial application

This invention relates to a device used on the kitchen cutting block, the device being discarded if soiled, or after a few times use as a combustible waste, which can be recycled, and which keeps the kitchen clean, can be used for food preparation outdoors, etc.

[0002]

Conventional technology

A conventional cutting board is made of wood or resin, is solid and in the board form and countless cut marks are made on it when it is used to cut food; these marks remain unless the board is replaned. Some resin boards have a peelable surface, but it, too, must be disposed of as noncombustible waste. Kitchens are more comfortable but the marks on the cutting board are an optimal place for bacteria and can cause food poisoning.

[0003]

Problem this invention intends to solve

Antibacterial spray or an antibacterial cutting board are not the solution. Food poisoning is frequent in the rainy season or summer and this invention intends to address this problem. Even outdoors, cutting boards in camp kitchens are not hygienic and this invention intends to eliminate such a problem.

[0004]

Means for solution

The product of this invention is to be discarded after having been used a few times. This product can be used separately for different foods and the product of Claims 1 and 2 is suitable for vegetables, fruits, etc. because moisture is discharged to the outside through small holes. The product of Claim 3 and 4 is suitable for fish, meat, etc., because the blood/juice of fish or meat penetrates into the middle layer from the top-layer and keeps it there from spreading outside. The product of this invention can be treated as general combustible waste after food preparation and it can also be made of recyclable material.

[0005]

Function

Its top layer is of waterproof paper with multiple small holes. Moisture from the food is released into the middle layer through such holes to keep its surface clean and these holes also prevent slipping of the food being cut. The middle layer retains moisture or blood/juice and prevents contamination of the food. In Claim 2, the four edges of the cutting board are folded into the pallet form to prevent the cut food from falling off and to prevent blood/juice from spreading to the outside.

[0006]

Practical example

Figure 1 shows a basic composition example of the simple paper cutting board of this invention and Figure 1 is a perspective view of the invention. The material of board 1 is paper which is coated or waterproofed. Small holes (1 mm - 10 mm) that penetrate the paper's front and back are provided to discharge moisture into the back surface. The simple paper cutting board of Figure 1 can be used on any flat surface, such as an existing cutting block, sink, etc., and it can be used on a flat surface at a camp site or even outdoors. An antibacterial agent can be incorporated into the paper material. The simple paper cutting board's waterproofed surface is safe for food and at the small holes it acts with an antibacterial agent to prevent spreading of bacteria. Since the material is basically paper, it is to be disposed of after a few times use or whenever its surface is damaged.

[0007]

Figures 2-3 show another practical example and Figure 2 is a perspective view of this invention with folded edge. Here, the material mentioned in section [0006] is used and the edges are folded a few mm-20 mm. In Figure 3, three edges are folded for use. Of course, it can be used in flat form without folding, but the folding prevents falling-off of prepared food from the simple paper cutting board.

[0008]

Figures 4-5 show another practical example and Figure 4 has a partially peeled part to show its various layers. Figure 5 shows its cross-section. This example is multilayered with the material of sections [0006] and [0007] as its top layer, water-retentive and water-absorbent material (pulp fibers, nonwoven cloth, etc.) as its middle layer and waterproof and flexible

material (vinyl, polypropylene, etc.) as its bottom layer, and these layers are bonded with adhesive, thermal fusing or pressure bonding into a flexible simple paper cutting board. The method of use is the same as that in sections [0006] and [0007], but the function is different, in that the moisture from the top layer is retained through small holes in its middle layer, but, because waterproofing of the bottom layer, the moisture retention is limited to the water retention of the middle layer. This practical example concerns mainly a simple paper cutting board for preparation of fish or meat and, when it is used similarly to the previous section, blood/juice are received in the middle layer, and, because of waterproofing of the bottom layer, blood/juice or odor do not leak to the outside, so the exterior of the board is kept clean and after the food preparation, the board is disposed as a raw waste.

[0009]

Effect of the invention

As detailed above, this invention can be used for commercial, residential, outdoors, purposes, etc., and it enables clean food preparation, so that it can prevent food poisoning sufficiently, and a small amount of antibacterial agent can add sufficient antibacterial effect to it.

Brief explanation of the figures

Figure 1 is a perspective view of the simple paper cutting board of this invention's practical example.

Figure 2 is a perspective view of the simple paper cutting board of this invention's practical example.

Figure 3 is a perspective view of the simple paper cutting board of this invention's practical example.

Figure 4 is a perspective view of the simple paper cutting board of this invention's practical example, in which a part is peeled off.

Figure 5 is a partial cross-section of the simple paper cutting board of this invention's practical example.

Explanation of the codes

- 1 - simple paper cutting board
- 2 - small hole
- 3 - folding
- 4 - folded part
- 5 - middle-layer material
- 6 - bottom-layer material

Figure 1

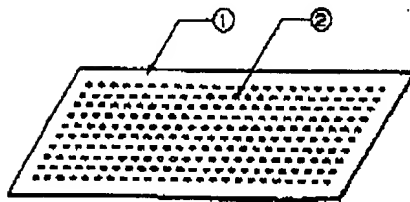


Figure 2

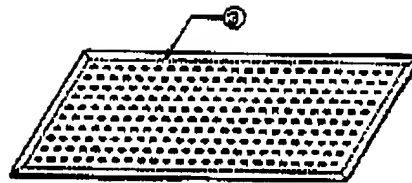


Figure 3

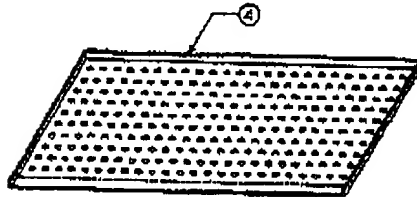
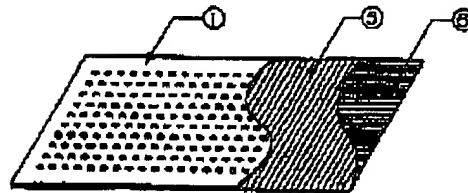


Figure 4



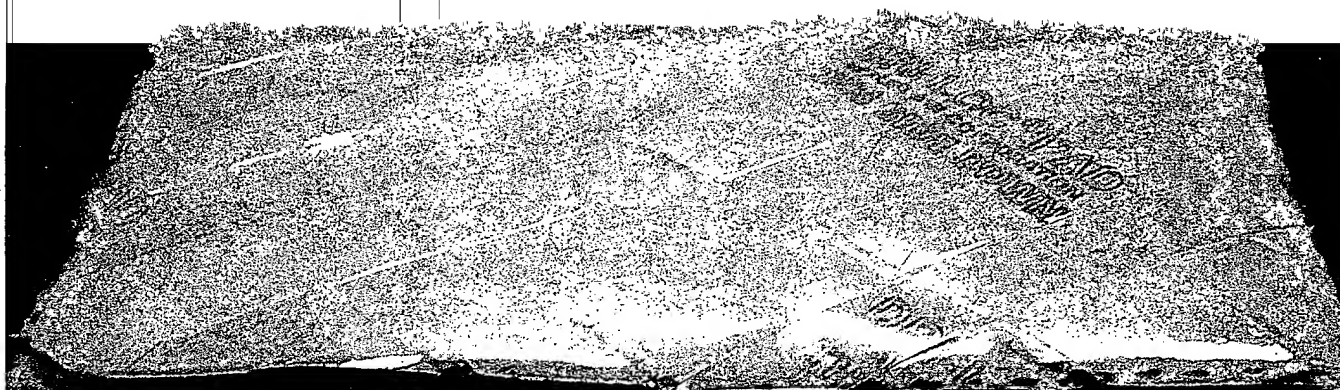


Photo 1

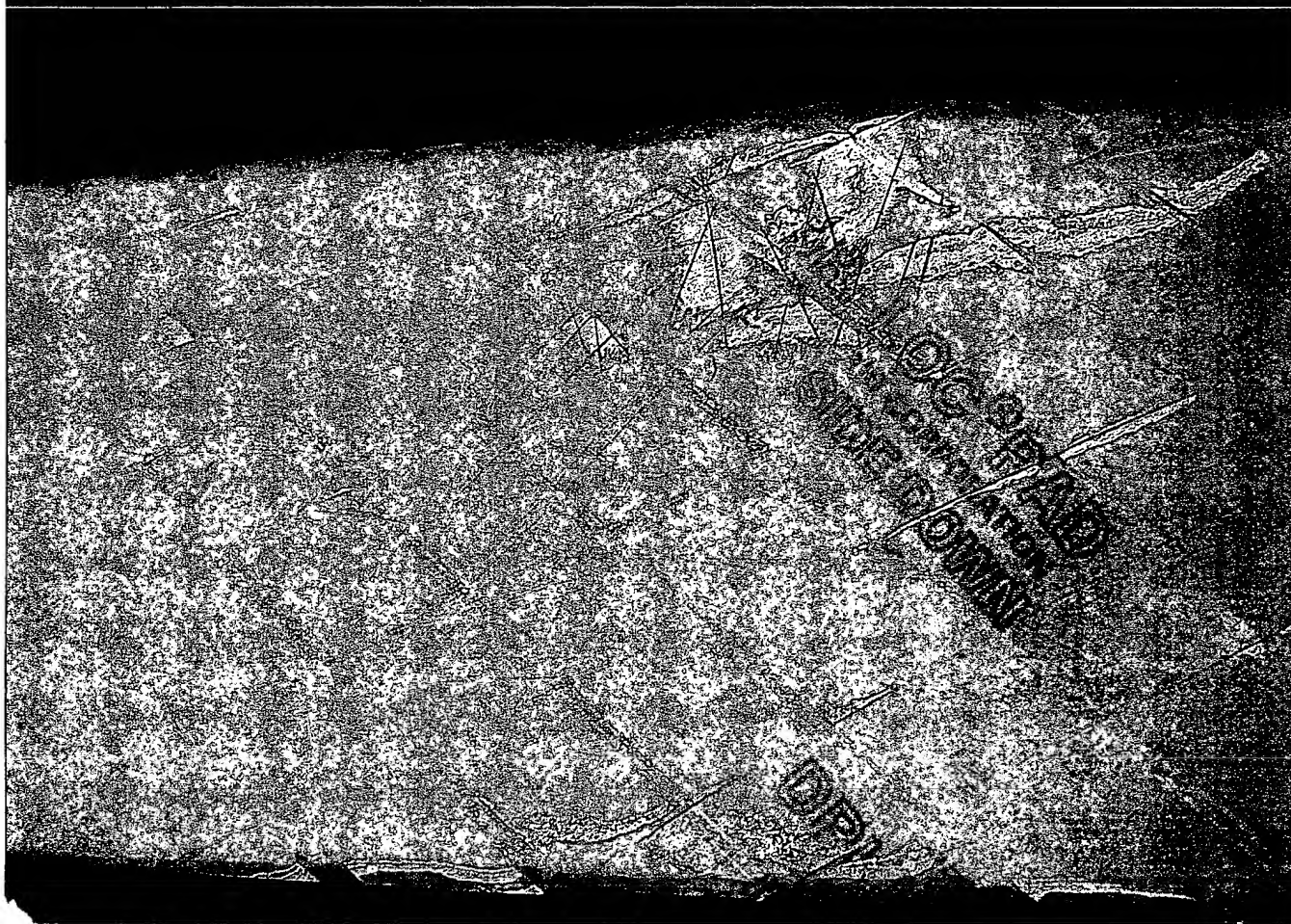


Photo 2

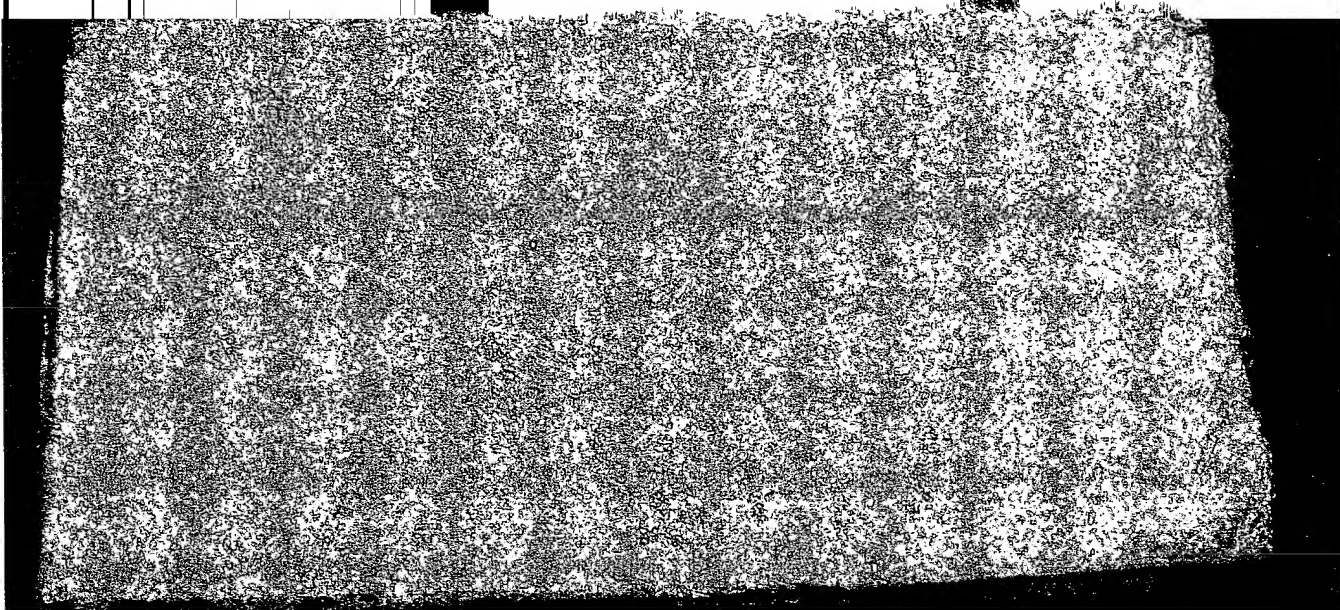


Photo 3

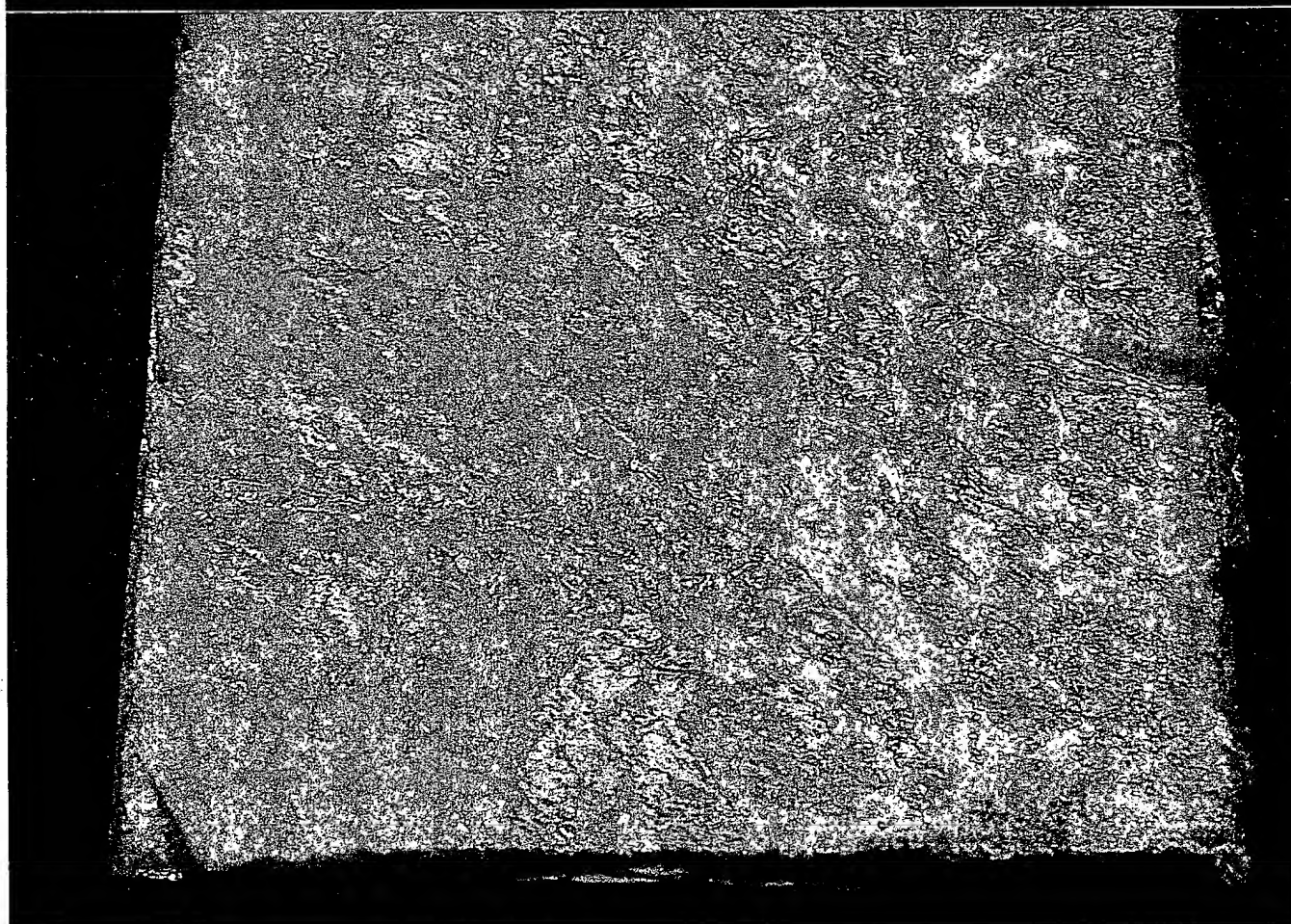


Photo 4

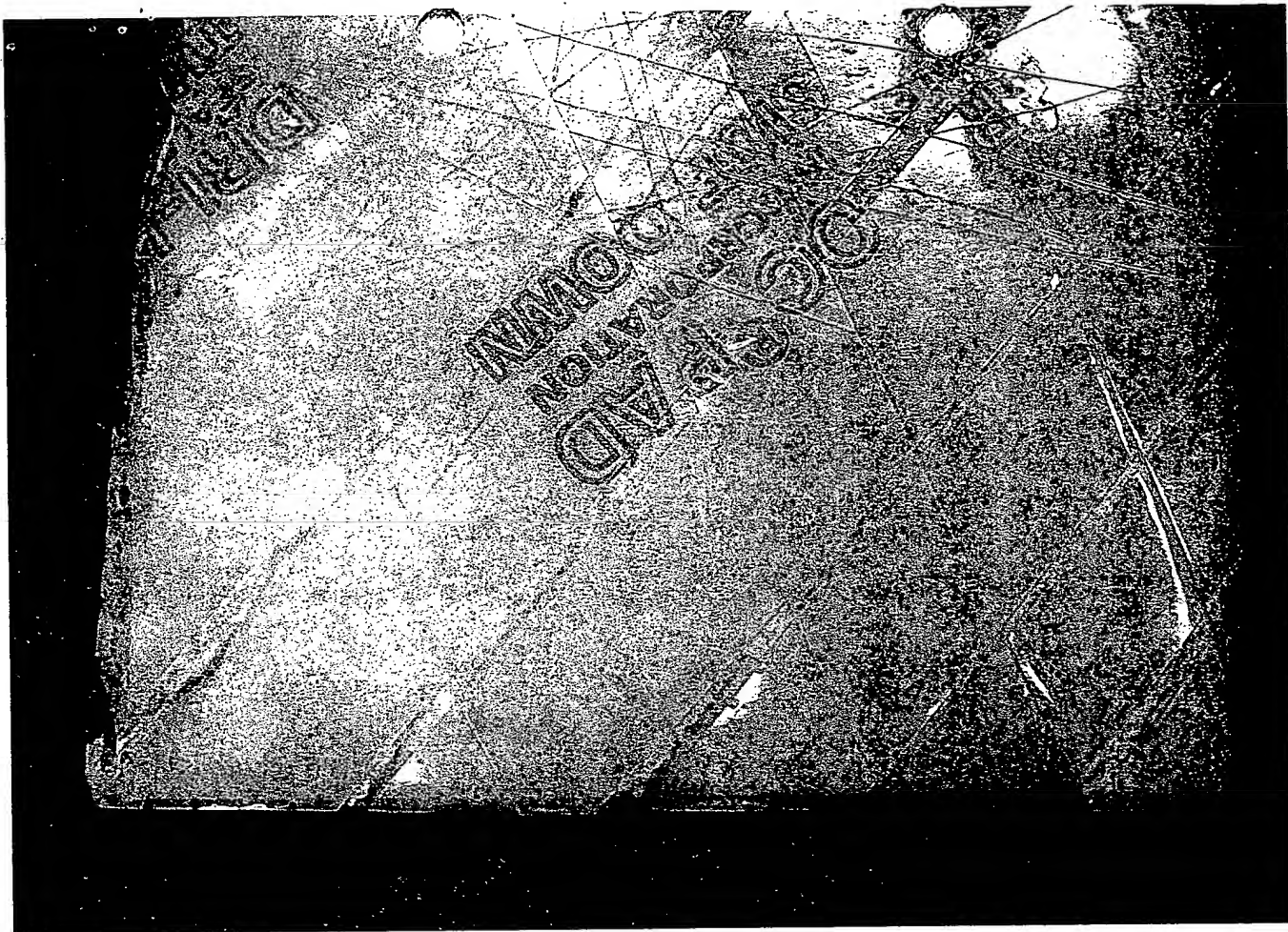


Photo 5

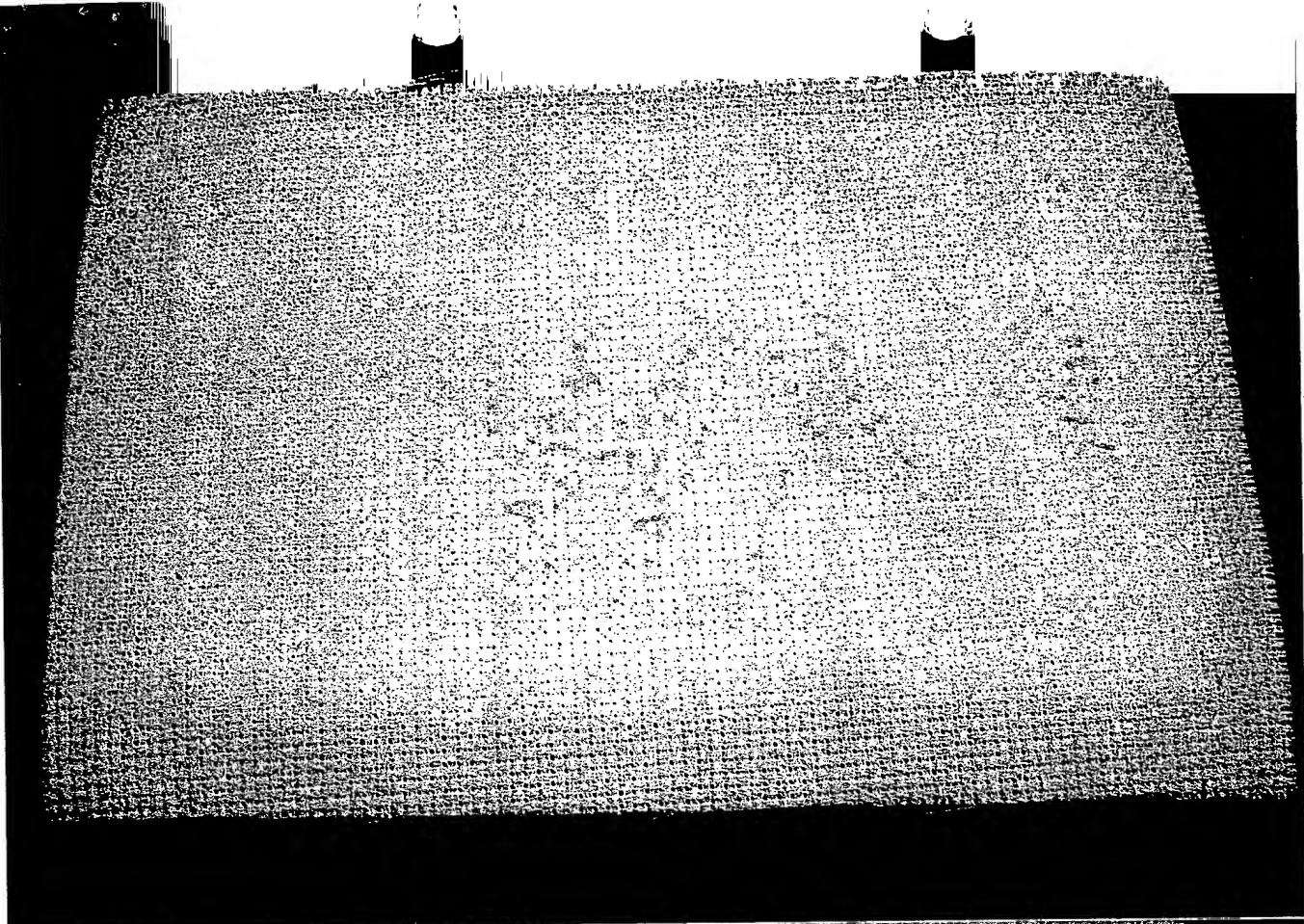


Photo 6



Photo 7

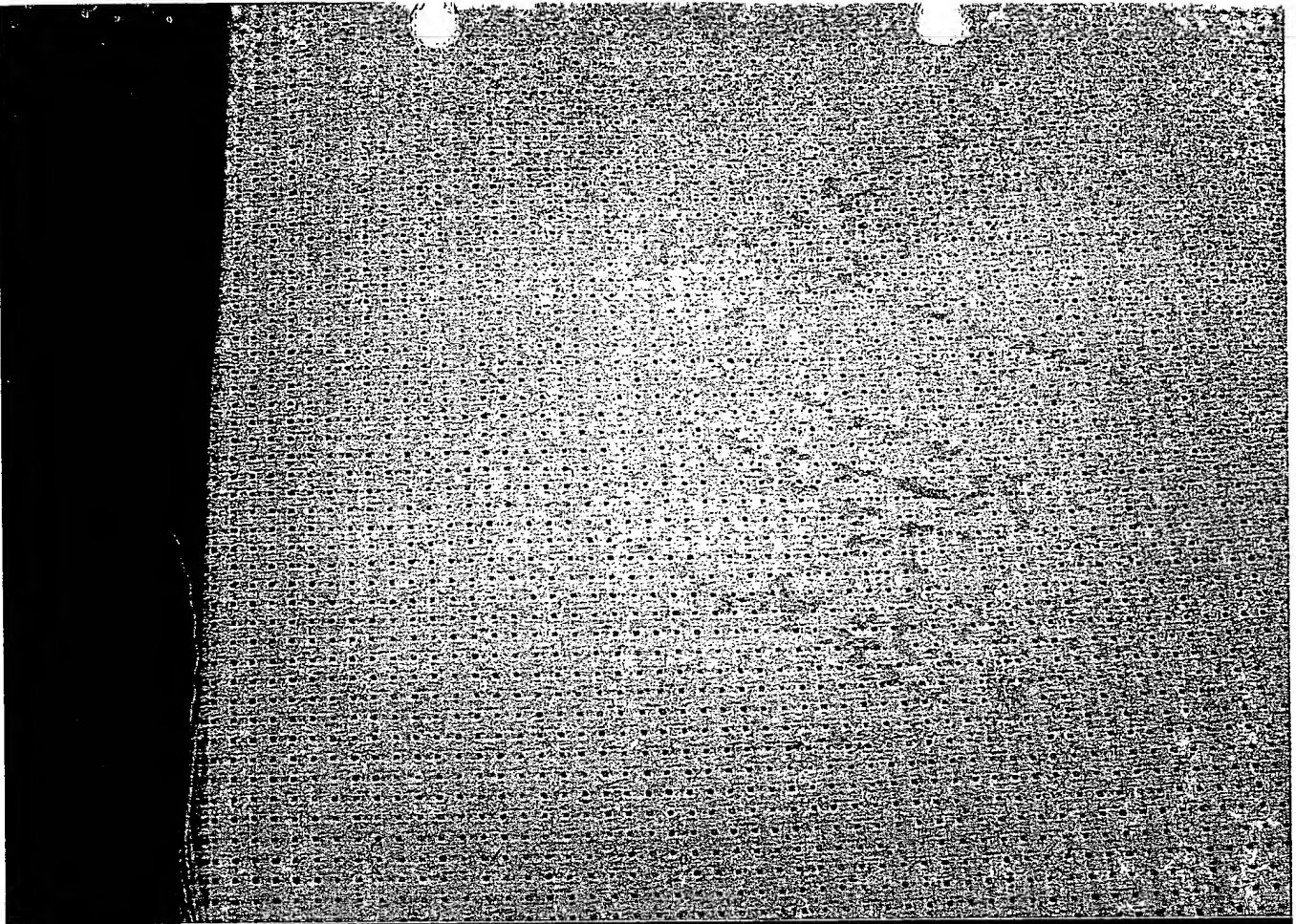


Photo 8

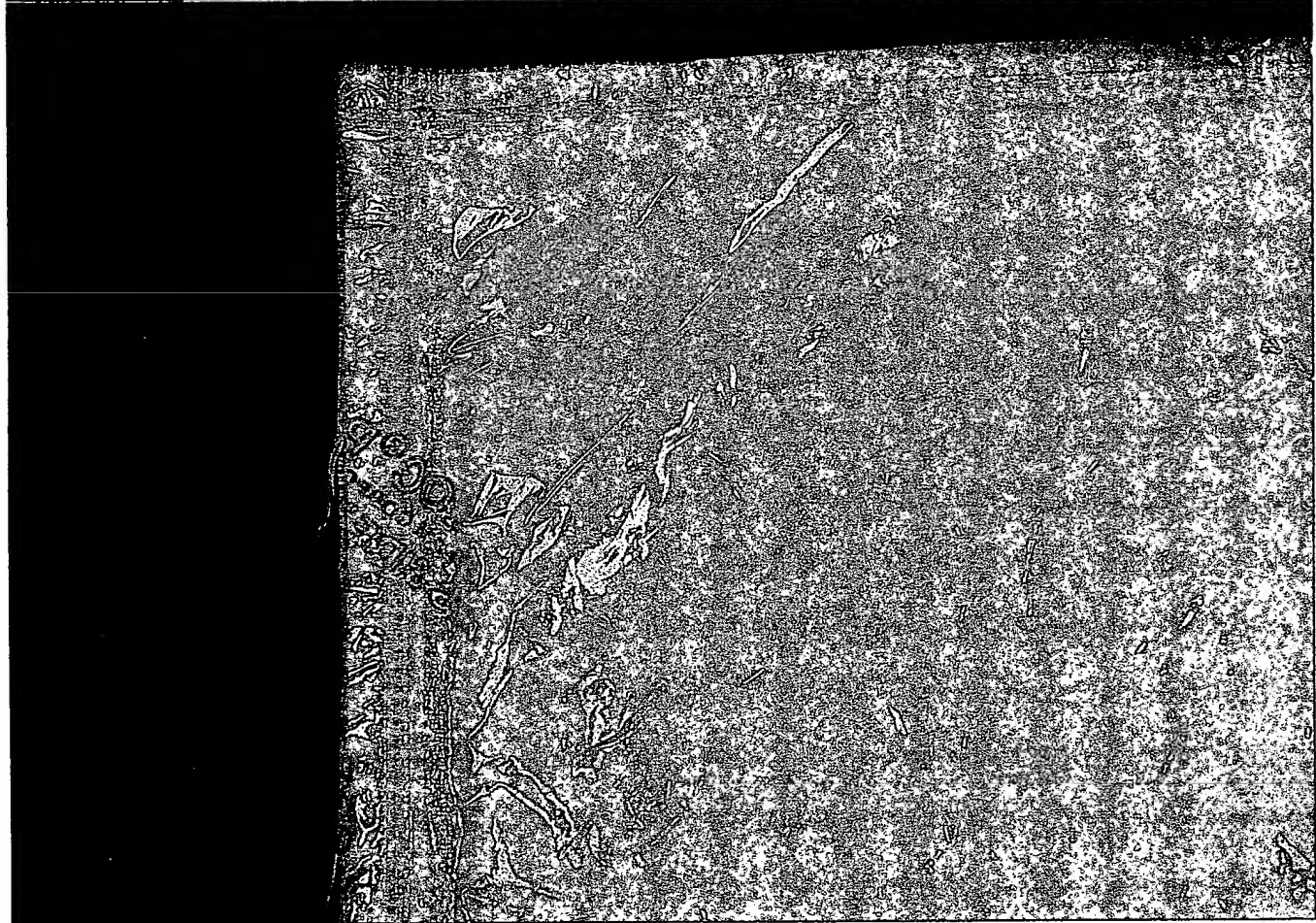


Photo 6

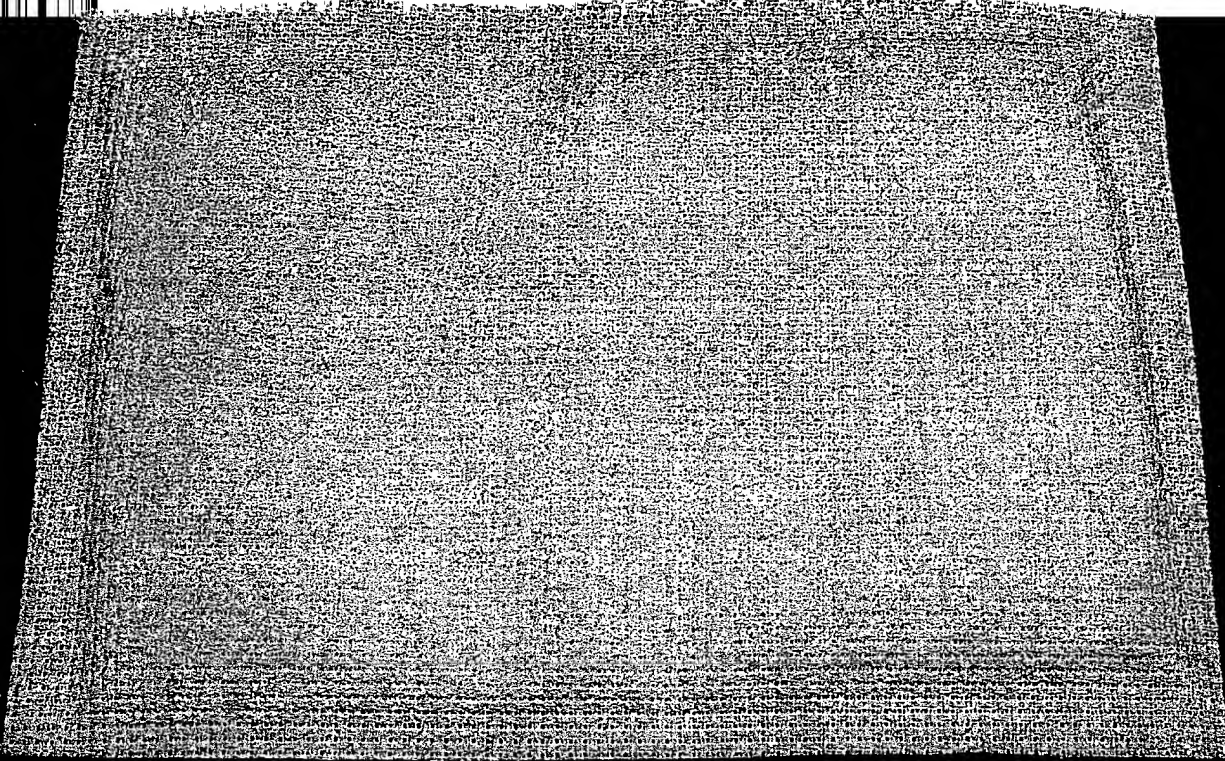


Photo 10



Photo 11

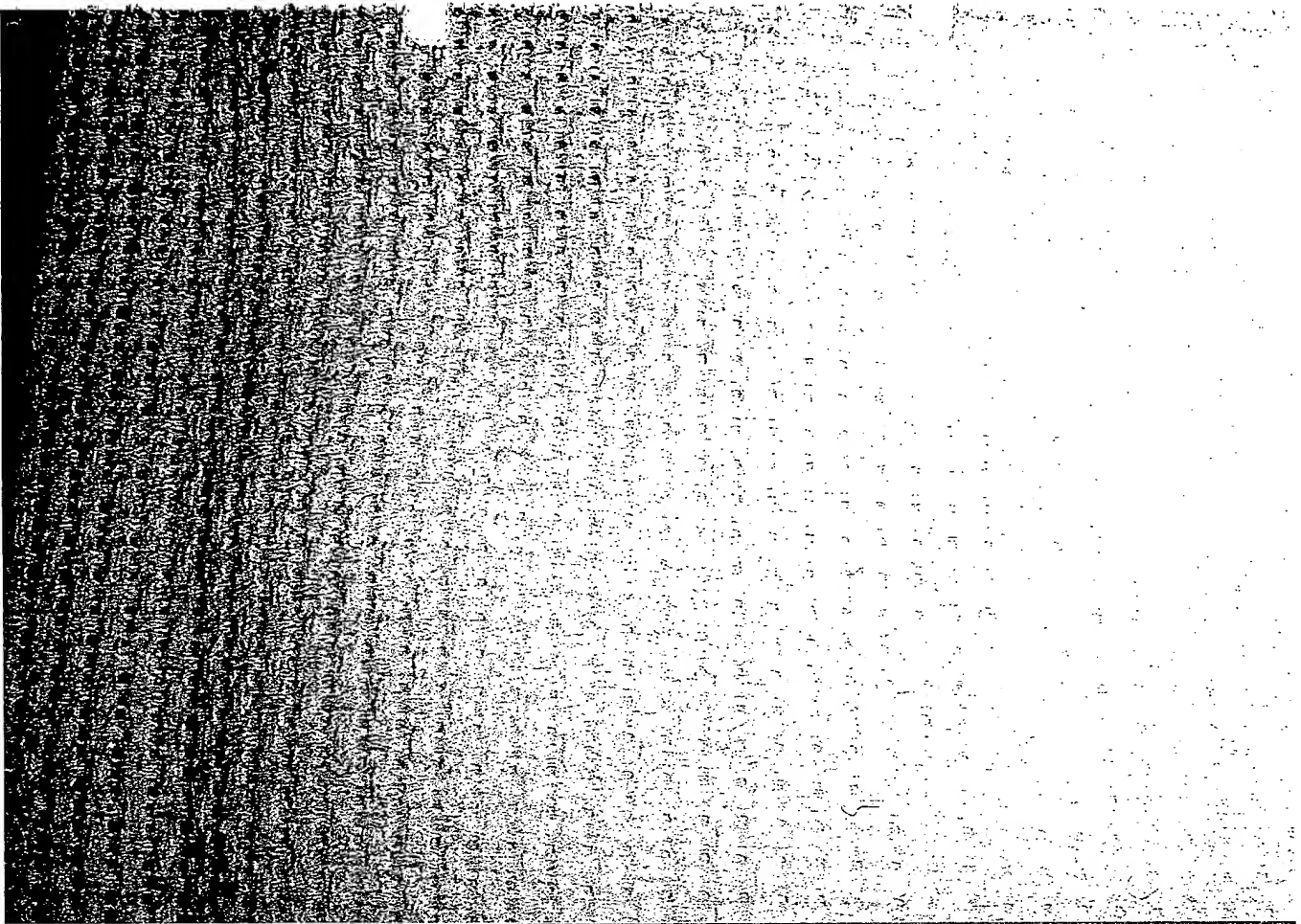


Photo 1:

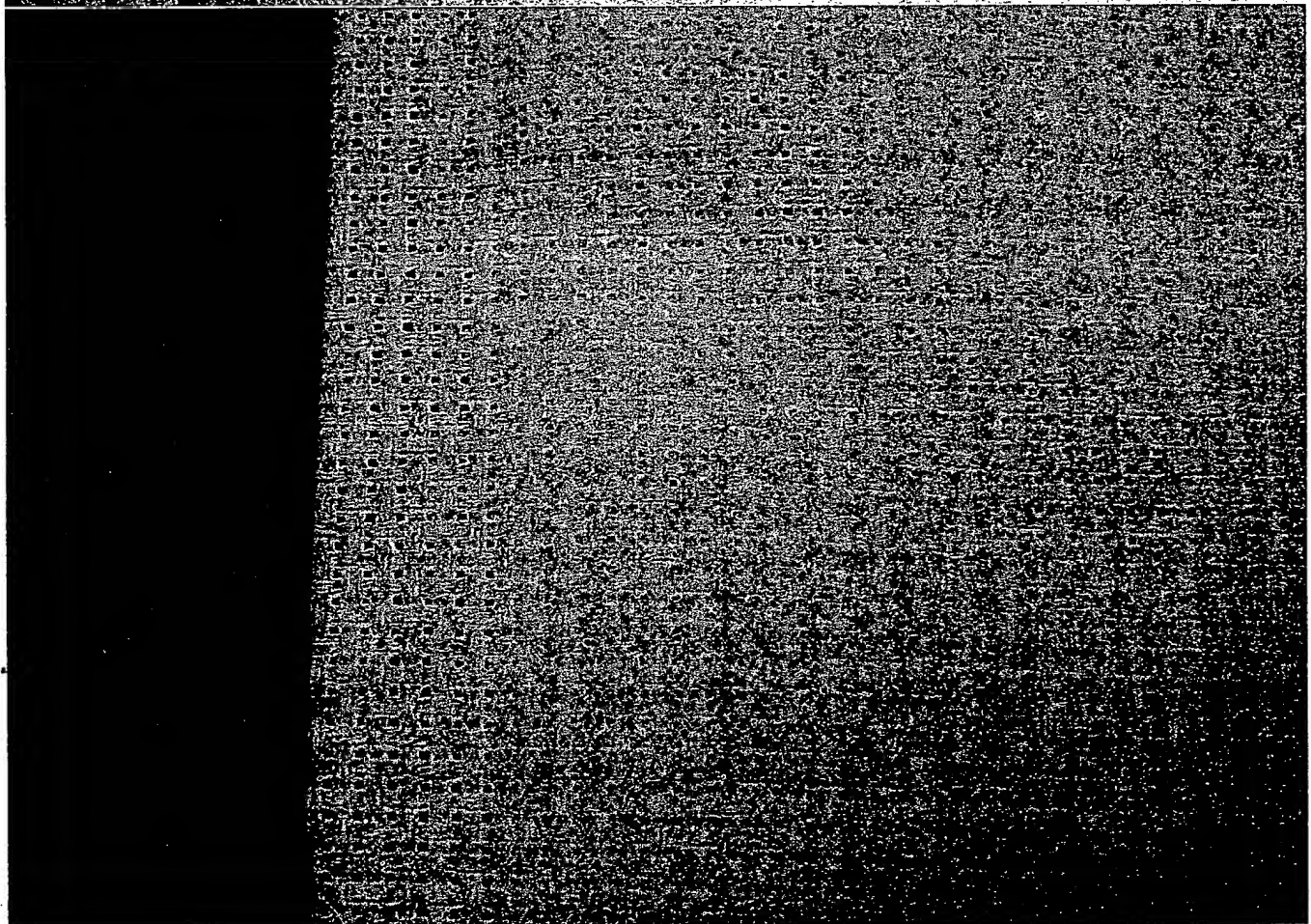


Photo 13